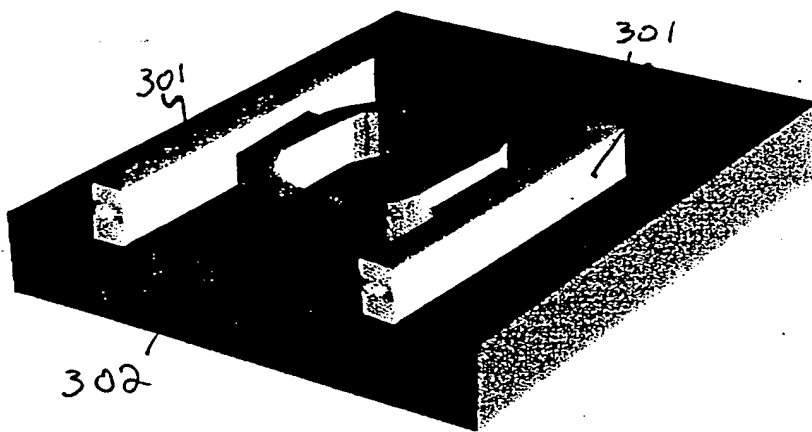


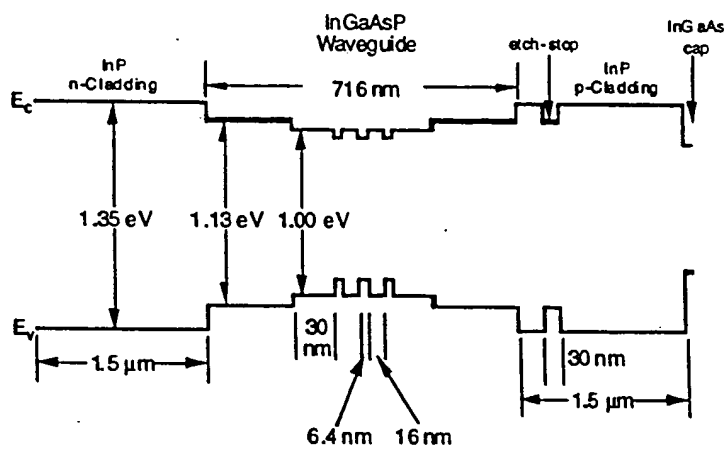
FIGURE 2



Schematic drawing of the racetrack laser.

FIGURE 3

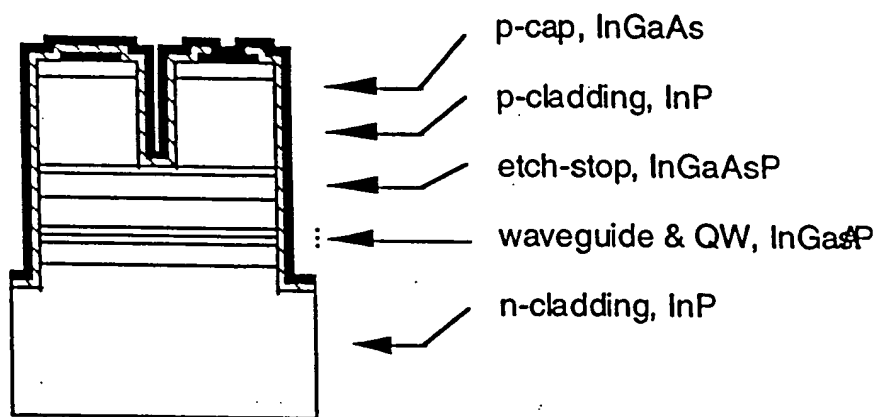
002030-1252360



The schematic drawing of the epitaxial structure.

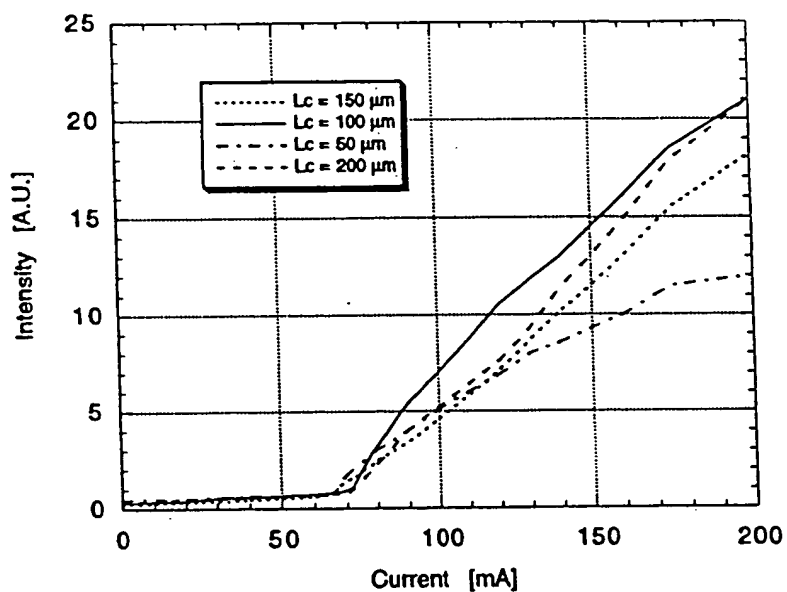
FIGURE 4

002000-143E360



A schematic diagram of the wafer view shown in cross section taken from the coupling region between the ring and the straight sections.

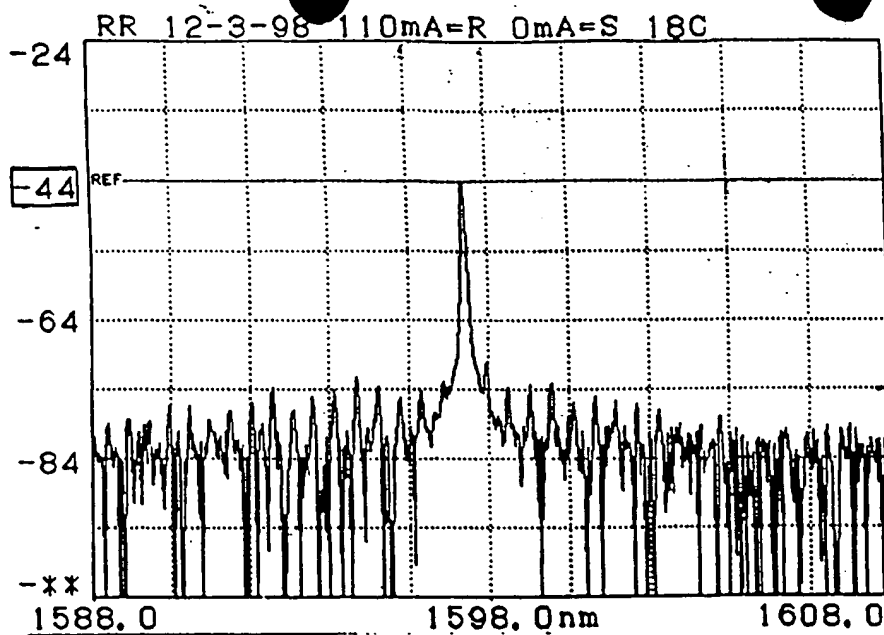
FIGURE 5



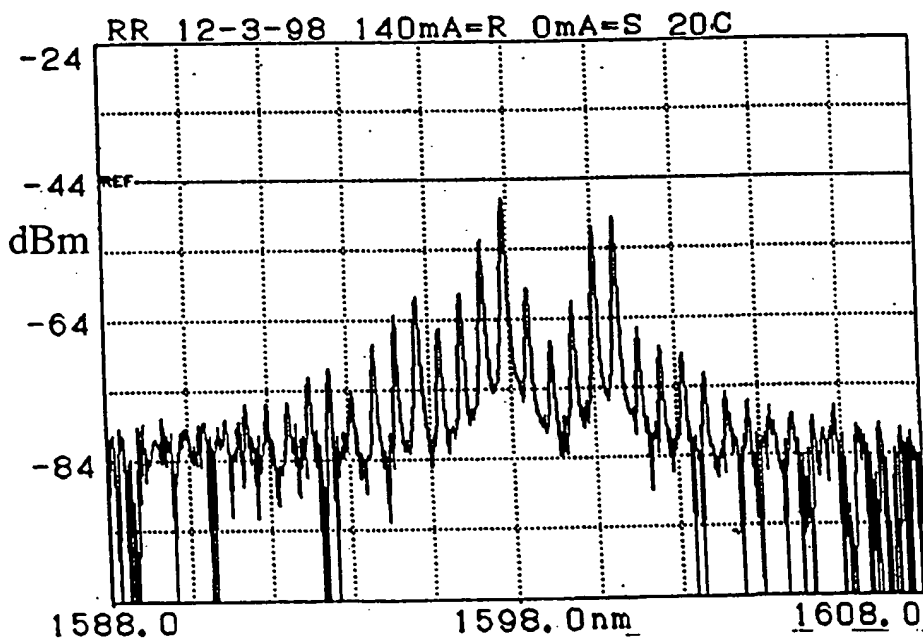
L-I curve for the racetrack laser with a coupling length ranging from 50-200 $\mu\text{m}$  showing nearly the same threshold current for all configurations, but with improved differential efficiency for the 100 $\mu\text{m}$  coupler.

FIGURE 6

FIGURE 7

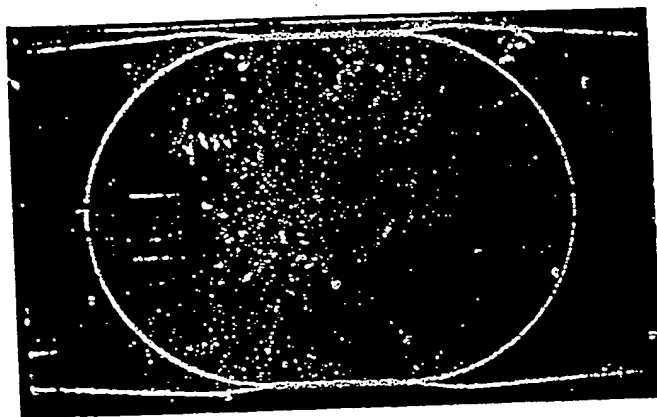


Lasing spectrum of the racetrack laser at a drive current  $I = 110$  mA, showing single mode operation with an SMSR = 26 dB. Single-mode operation is maintained from threshold to nearly  $2 I_{th}$



Lasing spectrum at a drive current  $I = 140$  mA. An abrupt transition from single-mode (see Fig. 7) to multi-mode operation, apparently due to self-pulsating.

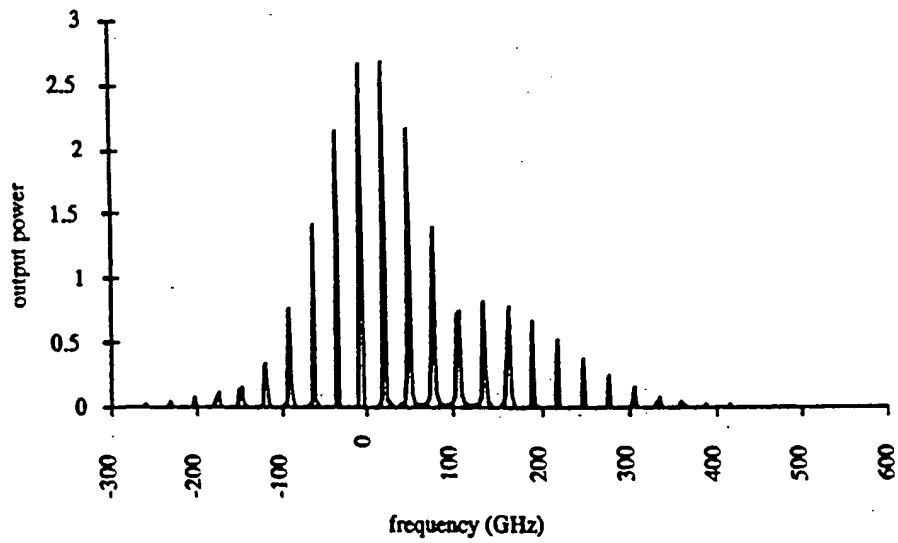
FIGURE 8



Dual-absorber mode-locked racetrack laser fabricated in GaAlAs/GaAs.

FIGURE 9





Computed output spectrum of a passively mode-locked racetrack laser.

FIGURE 10